



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,794	06/06/2005	Chunbo Dong	NTD 0002-US	6509
23719	7590	06/29/2007	EXAMINER	
KALOW & SPRINGUT LLP			PHAN, HAU VAN	
488 MADISON AVENUE			ART UNIT	
19TH FLOOR			PAPER NUMBER	
NEW YORK, NY 10022			3618	
			MAIL DATE	DELIVERY MODE
			06/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/537,794

Applicant(s)

DONG ET AL.

Examiner

Hau V. Phan

Art Unit

3618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-8 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Acknowledgment

1. The amendment filed on 5/7/2007 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo (5,722,502) in view of Suzuki et al. (6,625,534).**

Kubo in figures 1-7, discloses a power system for a dual-motor hybrid vehicle, comprising an internal combustion engine (28), a clutch (36), a torque distributing mechanism (38), a drive shaft (38a), a brake system and driving wheels (14), wherein the power system further comprises a main motor (10), a rotor shaft of the main motor connected with an output shaft of the torque distributing mechanism. Kubo also discloses an auxiliary motor or a generator (24), a rotor shaft (38b) of the auxiliary motor connected with a crankshaft of the internal combustion engine via a drive mechanism. The main motor and the auxiliary motor are electrically connected with a power battery (16). Kubo also discloses an entire vehicle controller (20), which can make the power system work in a parallel series hybrid vehicle and a series hybrid vehicle. When the

Art Unit: 3618

vehicle is in low-speed running operation condition, the system works in a pure electrical driving mode in which the internal combustion engine does not work and only the main motor drives the drive shaft, or the system works in a series driving mode in which the internal combustion engine only drives the auxiliary motor that generates electric power, and the generated electric power is transmitted to the main motor via the power battery to drive the drive shaft. When the vehicle is in full-accelerating operation condition, the system works in a parallel driving mode in which both the internal combustion engine and the main motor drive the vehicle simultaneously (col. 13, lines 32-42). When the vehicle is in braking and decelerating operation condition, the system works in an energy recovery mode in which the main motor is controlled to brake and generate electric power, and the power battery is recharged (col. 13, 42-48). When the vehicle is during torque shifting, the system works in auxiliary-driving mode in which the main motor drives the vehicle auxiliary during shifting. When the vehicle is in idling stop operation condition, the system works in an idling stop mode in which the internal combustion engine stops working (col. 13, lines 50-67). When the vehicle is in normal driving operation condition, the system works in normal running mode in which the internal combustion engine drives the vehicle independently (col. 13, lines 15-25). Kubo fails to show a step transmission.

Suzuki et al. in figures 2-4, teach a control apparatus comprising a step transmission (9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the power system having a torque distributing mechanism of Kubo with the control apparatus having a step transmission as taught by

Art Unit: 3618

Suzuki et al. in order to provide a continuously-variable speed change ratio optimal for an engine output.

Regarding claim 2, Kubo discloses the rotor shaft of the main motor connecting with the output shaft of the torque distributing mechanism via a drive mechanism.

Regarding claims 3 and 7, Kubo discloses the drive mechanism including one of shaft drive means, belt drive means, chain drive means, gear drive means, clutch drive means or a combination thereof.

Regarding claim 4, Kubo discloses the main motor and the auxiliary motor that are connected with the power battery via a controller, a control unit and a loop circuit of a distribution box.

Regarding claim 6, Kubo discloses the entire vehicle controller, which can make the power system work in starting mode in which the main motor drives the vehicle automatically when the vehicle is being started.

Regarding claim 8, Kubo discloses the main motor, which is arranged on a drive shaft.

Response to Arguments

4. Applicant's arguments with respect to claims 1-4 and 6-8 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 3618

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hau V. Phan whose telephone number is 571-272-6696. The examiner can normally be reached on 7:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Ellis can be reached on 571-272-6914. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hau V Phan
Primary Examiner
Art Unit 3618

Hau Phan
6/17/07